

# Work Order ID 48545

June 26, 2009 7:41:21 AM



Page 1

Item ID: D3319-7 **64**

Accept



Setup Start



Revision ID: B

Item Name: Wearplate

Stop



Start Date: 15/07/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 4.00

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3319

Rev B

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3319 Dwg Rev: **B** Prog Rev: **B** 2-  
Deburr if necessary

**B 97-1**

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

**B 97-1**

**(10)**

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

**- 809107101 (410)**

# Work Order ID 48545

June 26, 2009 7:41:21 AM



Page 2

Item ID: D3319-7

Revision ID: B

Item Name: Wearplate

Start Date: 15/07/2009 Start Qty: 4.00

Required Date: 03/08/2009 Req'd Qty: 4.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130



Small Fab

Small Fab

Small Fab

Memo

Deburr if necessary

0.00

0.00

N/A

140



Brake NC

Brake NC

NC BRAKE

Memo

Form using DT8326 & DT8261 as per Dwg D3319Rev: B

SB 09/07/02

0.00

0.00

150



QC

Quality Control

QC6- Inspect dimensions to drawing

Memo

0.00

0.00

=> 80867/02 (40)

# Work Order ID 48545

June 26, 2009 7:41:21 AM



Page 3

Item ID: D3319-7

Accept



Setup Start



Revision ID: B

Item Name: Wearplate

Stop



Start Date: 15/07/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

Weld hard surface using D3319-7T2 per QSI 004 and Dwg D3319 Rev:

Qty Part Number Description Batch A/R  
N/A 7560 Hardcoat Rod m109813

EL 9-7-8

170

0.00



QC

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

Quality Control

⇒ 802102108 (K)

180

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

⇒ 802102108 (K)

# Work Order ID 48545

June 26, 2009 7:41:21 AM



Page 4

Item ID: D3319-7

Accept



Setup Start



Revision ID: B

Stop



Item Name: Wearplate

Start Date: 15/07/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

190

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

8:45 AM

FINISH TIME:

OVEN TEMPERATURE:

320 OF

M109091

HP

09-07-09 (X12)

200

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

09-07-9

10

BR

210

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify on inside surface using a permanent fine point marker with the following: ITCCA-PDA, Dart Aerospace Ltd. P/N: D3319-7, B/N:

BXXXXX. For Product Eligibility see PDA05-18 and

Stock Location: 997

9/7/9

(10x)

54

Date: Friday, 12/06/2009 9:55:44 AM  
 User: Julie Dawson

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : WEARPLATE
<b>Job Number</b> : 48545	
<b>Estimate Number</b> : 10610	
<b>P.O. Number</b> :	<b>Part Number</b> : D33197
<b>This Issue</b> : 12/06/2009 <b>S.O. No.</b> :	<b>Drawing Number</b> : D3319 REV. B
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : / / <b>Type</b> : SMALL /MED FAB	<b>Drawing Revision</b> : B
<b>Previous Run</b> : 33115	<b>Material</b> :
<b>Written By</b> :	<b>Due Date</b> : 19/06/2009 <b>Qty:</b> 4 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : <u>JLD 09.06.12</u>	
<b>Comment</b> : Est: A 05.05.12 New issue KJ/JLM Est Rev:B Now on Waterjet 07-06-26 JLM	

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
----------------	------------------------------	----------------------

1.0	M1010S18GA	1010/1025 SHEET .048
-----	------------	----------------------



**Comment:** Qty.: 0.5754 sf(s)/Unit Total : 2.3016 sf(s)

1010/1025/A21/6aA SHEET .048

Batch: 11964 IB 9-7-1

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



**Comment:** FLOW WATER JET

1-Cut as per Dwg D3319

Dwg Rev: B

Prog Rev: B

IB 9-7-1

2-Deburr if necessary

IB 9-7-1

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



IB 9-7-1

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



**Comment:** SECOND CHECK

8096761 (40)

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------



**Comment:** SMALL & MEDIUM FAB RESOURCE 1

Deburr if necessary

IB 9-7-1

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Friday, 12/06/2009 9:55:44 AM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 48545

Part Number: D33197

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

Form using DT8326 & DT8261 as per Dwg D3319 Rev: B

SB 09/07/02

7.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

S 09/07/02 (HID)

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld hard surface using D3319-7T2 per QSI 004 and Dwg D3319 Rev: B

Qty Part Number Description

Batch

A/R N/A

7560 Hardcoat Rod

M107813

FL 9-7-8 (HID)

9.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

S 09/07/08 (HID)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/07/08 (HID)

11.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME:

8:45 AM

OVEN TEMPERATURE:

320°F

FINISH TIME:

9:15 AM

SH 09-07-09 (HID)

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

BR 09-07-09 (HID)

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify on inside surface using a permanent fine point marker with the following:

TCCA-PDA, Dart Aerospace Ltd.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Date: Friday, 12/06/2009 9:55:44 AM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 48545

Part Number: D33197

Job Number:



Seq. #:

Machine Or Operation:

Description :

P/N: D3319-7, B/N: BXXXXX

For Product Eligibility see PDA05-18

and Stock

Location: \_\_\_\_\_

14.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

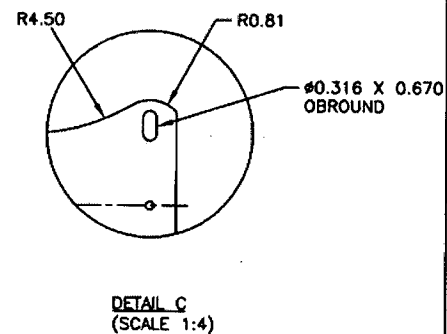
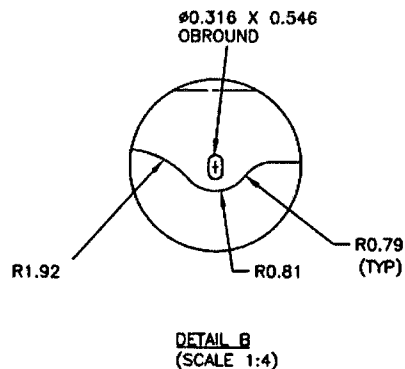
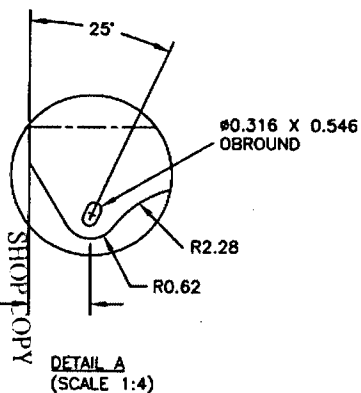
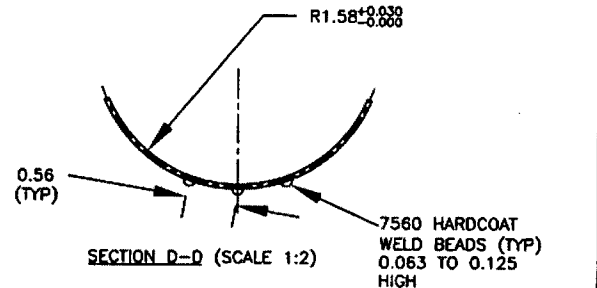
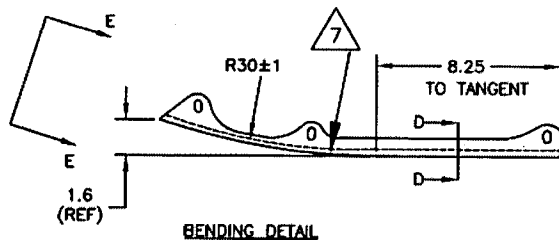
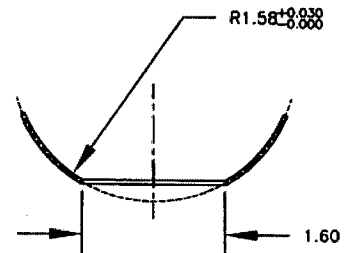
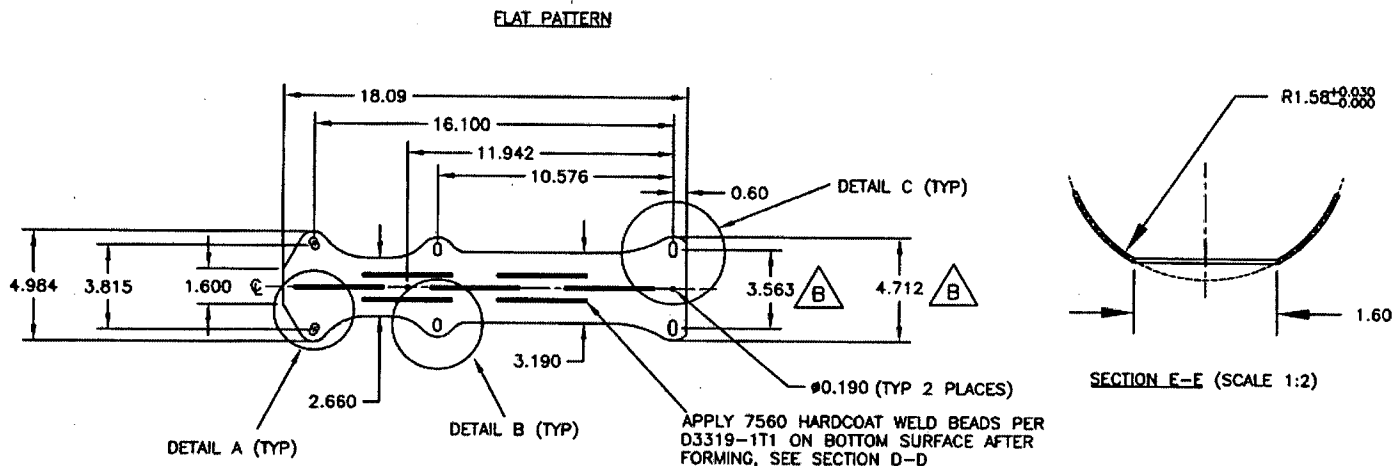
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**DART****D3319-1 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:  
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18"

DESIGN	DRAWN BY	DART AEROSPACE LTD
P41	P41	HAMKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3319
DATE	TITLE	REV. B
05.06.06	WEARPLATE	SHEET 1 OF 5
		SCALE
		1:8
A	04.09.24	NEW ISSUE
B	05.06.06	WIDEN HOLES, REDUCE WIDTH -3/-5/-7

**RELEASED**  
05-09-30-10

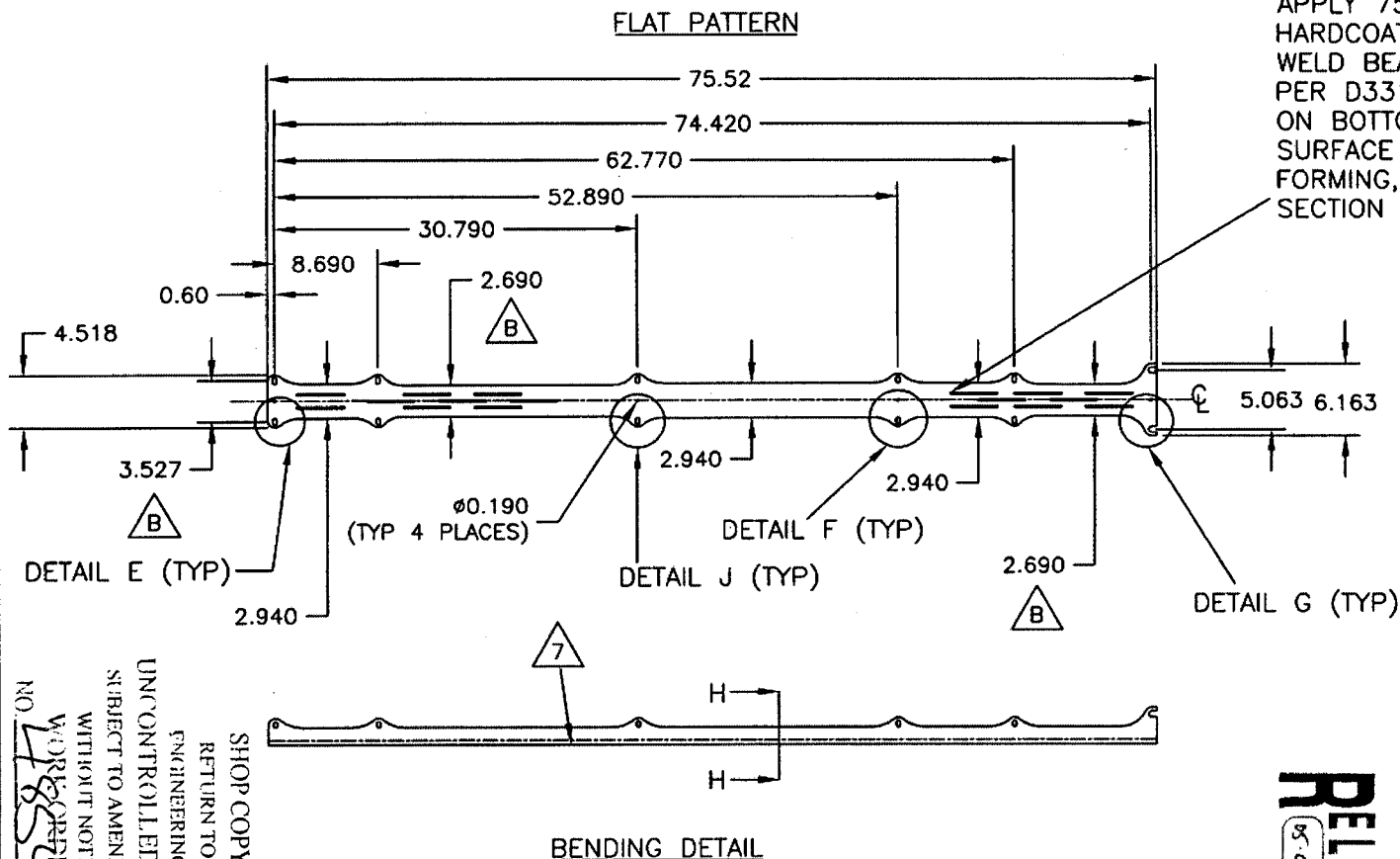
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WORK ORDER  
NO. 185418

**DART**

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CHECKED 05.06.06	APPROVED 05.06.06	DRAWING NO. D3319
DATE	TITLE	WEARPLATE
05.06.06	SCALE	1:15

APPLY 7560  
HARDCOAT  
WELD BEADS  
PER D3319-3T1  
ON BOTTOM  
SURFACE AFTER  
FORMING, SEE  
SECTION H-H



**RELEASED**  
05.06.06

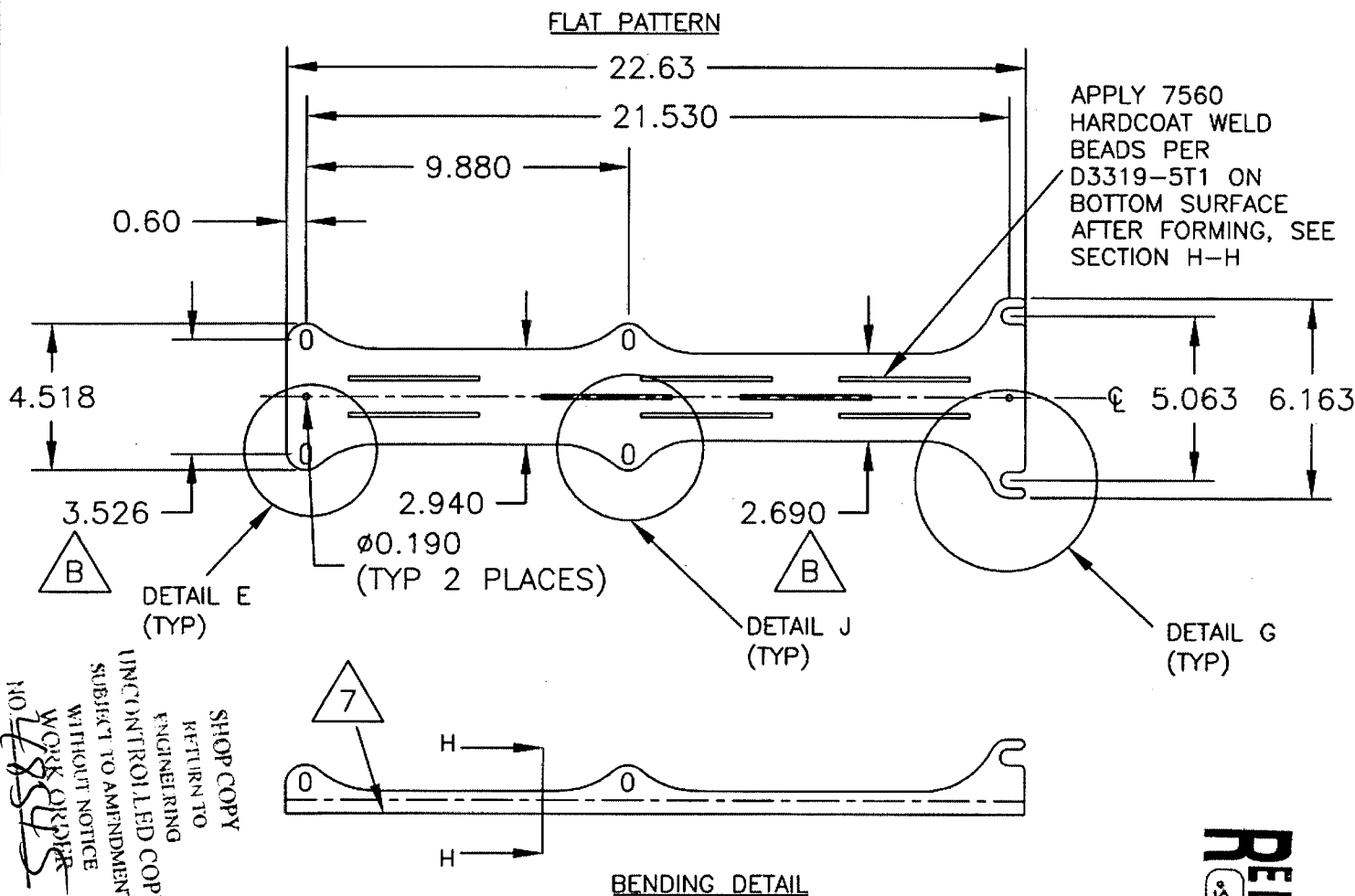
**D3319-3 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:  
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX,  
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

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NO. 148528

**DART**

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DATE	05.06.06	DRAWING NO.	D3319	REV. B
		TITLE	WEARPLATE	SHEET 3 OF 5
				SCALE 1:5

**RELEASED**  
05.09.30**D3319-5 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:  
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-5 B/N BXXXXX,  
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WORK ORDER  
NO. 48545

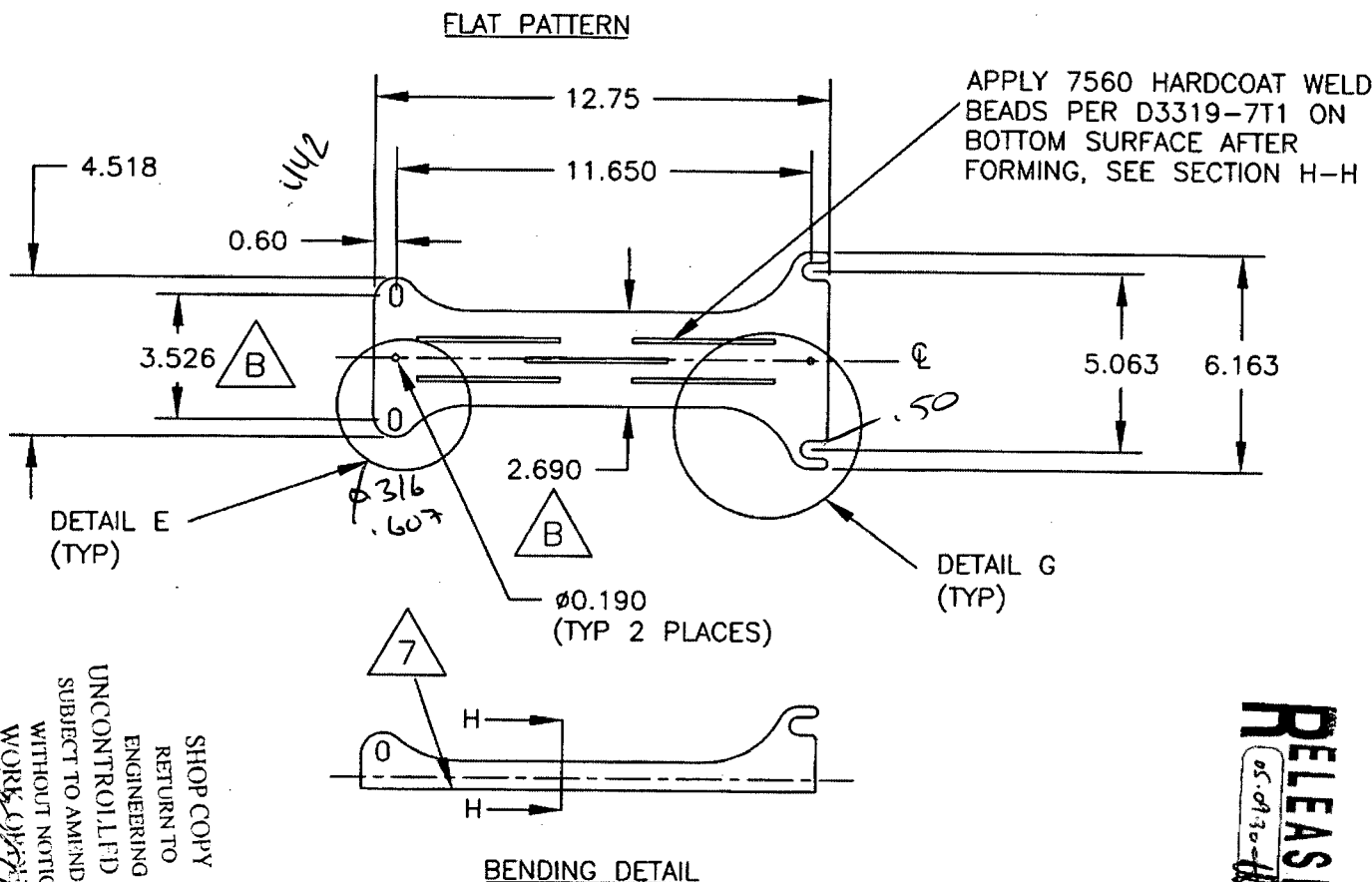
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DESIGN	PH	DRAWN BY	PH	<b>DART AEROSPACE LTD</b>
CHECKED	PH	APPROVED	PH	HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	DRAWING NO.	D3319	REV. B
TITLE	WEARPLATE	SHEET	4 OF 5	SCALE
				1:5

**RELEASED**  
05.09.10-11



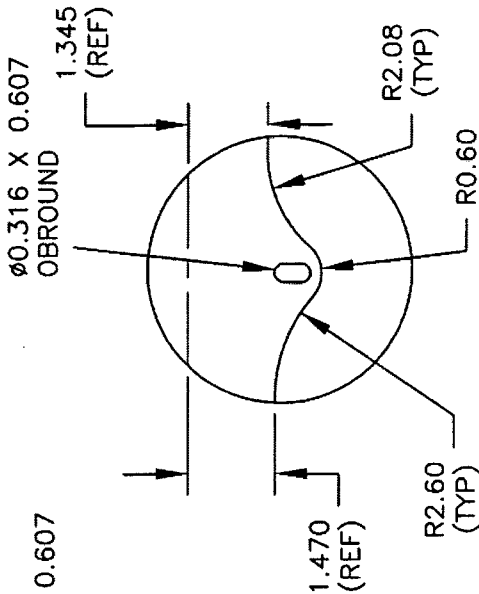
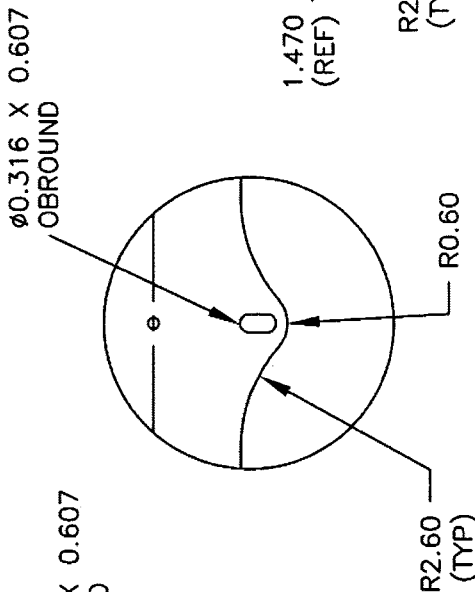
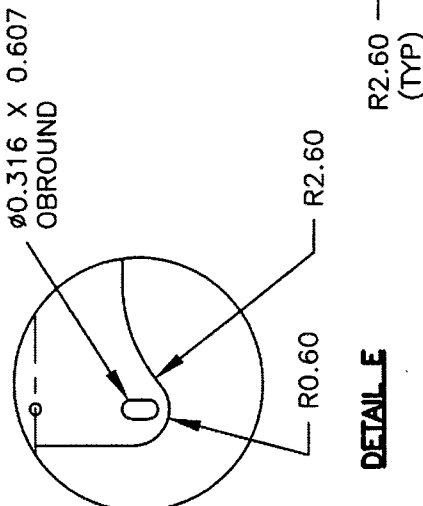
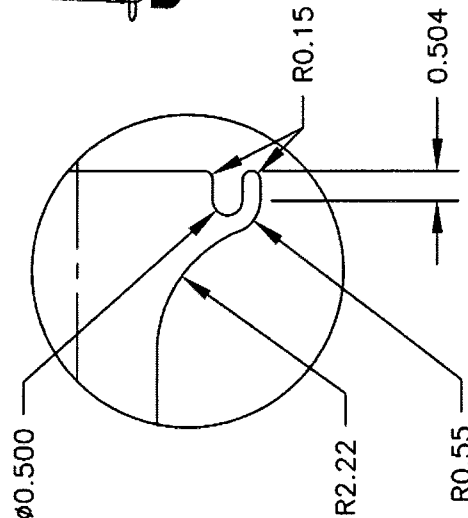
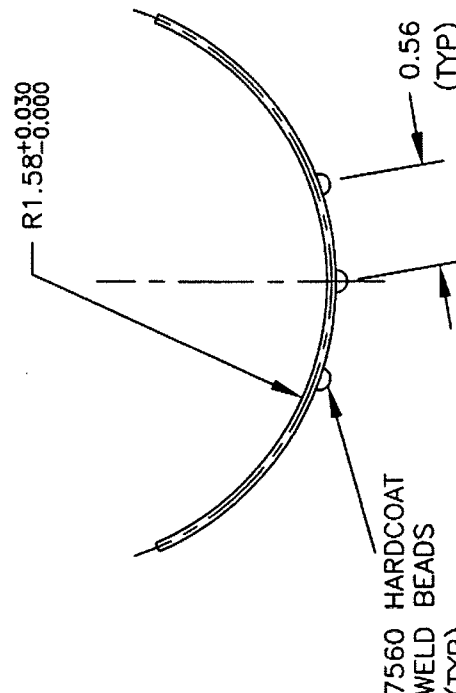
**D3319-7 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:  
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-7 B/N BXXXXX,  
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

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DESIGN <i>PH</i>	DRAWN BY <i>PH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3319	REV. B SHEET 5 OF 5
DATE 05.06.06	TITLE WEARPLATE		SCALE 1:3

**RELEASED**  
05.09.30**DETAIL J****DETAIL I****DETAIL E****DETAIL G****SECTION H-H  
(SCALE 1:1)**

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